

# Abra Penezić

PhD

abra@irb.hr

date and place of birth: 20.02.1986.

Zagreb, Hrvatska

Web page: <http://www.irb.hr/eng/People/Abra-Penezic>

---

## Current work status

Since 01. 11. 2017 Research associate in the Laboratory for Physical Chemistry of Traces, Rudjer Boskovic Institute

---

## Work experience

01. 05. 2016 - 31. 10. 2017. Postdoctoral position on FP7 project SCHeMA (Integrated In Situ Chemical MAPPING Probes), in the group of dr. Eric Bakker, Department of inorganic and analytical chemistry, University of Geneva, Switzerland. On a study leave of up to 2 years.

01. 04. 2015 - 31. 10. 2017. Research assistant, postdoctoral position in the Laboratory for marine and atmospheric biogeochemistry, Division for Marine and Environmental Research, Rudjer Boskovic Institute (RBI), Zagreb, Croatia. Received a title of research assistant on 01. 03. 2017.

08. 05. 2009 – 30. 03. 2015 Assistant, PhD student in the Laboratory for physical chemistry of aquatic systems, Division for Marine and Environmental Research, RBI, Zagreb, Croatia

12. 01. 2009 – 07. 05. 2009 Associate in the Laboratory for physical chemistry of aquatic systems, Division of Marine and Environmental Research, RBI, Zagreb, Croatia

---

## Field of work and interest

- Using electrochemical methods for observing and analysing biogeochemical processes in aquatic environments, for detection of organic and inorganic pollutants (polycyclic aromatic hydrocarbons, metals)
- Electrochemical sensor development
- Electrochemical investigations of lipid monolayer behaviour
- Lipid monolayer behaviour research by using Langmuir-Blodgett trough
- Lipid class characterisation in aquatic systems by using thin layer chromatography.

---

## Education

- 2009 - 2015 Faculty of Science, University of Zagreb, Department of Geology, doctoral studies in Oceanology. PhD in the scientific field of natural sciences, science field of interdisciplinary natural sciences (Marine science).  
24. 02. 2015 – Doctoral thesis defended, entitled: "Development of an electrochemical sensor for polycyclic aromatic hydrocarbons in water".
- 2004 - 2008 Faculty of Science, University of Zagreb, Department of Chemistry, Undergraduate study of Chemistry, B. Sc. Chemistry.  
12. 12. 2008 Thesis defended entitled: "Vertical distribution of lipids in Rogoznica lake in early spring and summer".
- 2000 - 2004 Antun Gustav Matos high school, Zabok.

---

## Working and training in international research groups

- October 2015 (two weeks) Institute of Oceanology of the Polish Academy of Sciences, dr. Drozdowska, scientific cruise on R/V Oceania on the Baltic Sea.
- March - May 2015 (two months) Institute of Chemistry, Hebrew University of Jerusalem, Jerusalem, Israel, dr. Yitzchaik; research of peptide modified surfaces for polycyclic aromatic hydrocarbon detection.
- October - November 2013 (one month) Interdisciplinary Research Institute, Lille, France, dr. Szunerits; learning electrochemical techniques for electrode modification and using the method of surface plasmon resonance.
- July 2011 (one week) Max Planck Institute, Golm, Germany, dr. Brezesinski; learning Langmuir-Blodgett and Langmuir Schaeffer techniques for lipid film transfer on solid substrates.
- 2009 - 2011 (four visits; 11 weeks in total) University of Leeds, Leeds, United Kingdom, dr. Nelson; learning about the development of the mercury microelectrode and its application in a flow cell for fast electrochemical analysis.

**Associate on projects**

- Since 01. 05. 2016 Integrated In Situ Chemical MAPPING Probes, M.-L. Tercier-Waeber; EU FP7- Ocean 2013.2
- 2014 - 2018 Appearance and interaction between biologically important organic compounds and micronutrient metals under environmental stress in marine ecosystem, B. Gašparović, Financed by Croatian Science Foundation.
- 2008 - 2011 NATO, Science for peace, project: Project SfP 983147: B. Gašparović, L.A. Nelson, Sensors based on biomembranes for the detection of toxins and pollutants.
- 2009 - 2015 Nature of organic matter, interaction with traces and surfaces in environment: I. Ciglencečki-Jušić, Financed by the Croatian ministry of science and education.
- 

**Scientific publications**

Scientific publications in Journals indexed by Current Contents = **10**  
(nine published and one in press)  
Total number of citations: **64**, h-index= **4**  
Abstracts in books of abstracts = **19**

---

**Participation in teaching**

- February - March 2017 Leading a student project "Water Content Analysis" as part of the laboratory exercises of the course Analytical Chemistry 2, for 3<sup>rd</sup> year students of Chemistry at the University of Geneva, Switzerland.
- 

**Grants/Awards**

- 2015 American Chemical Society travel grant for attending the Pittsburg Conference on Analytical Chemistry & Applied Spectroscopy (Pittcon), Atlanta, Georgia, United States of America.
- 2014 Award for scientific publication, given by the Division for Marine and Environmental Research, RBI
- 2013 Travel grant sponsored by RBI and French Embassy, for a one month scientific visit to the interdisciplinary Research Institute, Lille, France
- 2013 Award for scientific achievement, given by the Division for Marine and Environmental Research, RBI
- 2008 Department of Chemistry Medal for excellence in studies, Faculty of Science, University of Zagreb, Croatia.

**Conferences and workshops**

- Author and co-author of 21 talks and poster presentations at home and international conferences and workshops including:
- 18. – 19. 11. 2016 14<sup>th</sup> Swiss Geoscience Meeting, Geneve, Switzerland (poster)
  - 06. – 10. 03. 2016 Pittsburg Conference on Analytical Chemistry & Applied Spectroscopy (Pittcon), Atlanta, Georgia, United States of America. (talk)
  - 15. – 17. 09. 2014 COST Action MP1202 General Meeting, Istanbul, Turska (talk)
  - 15. – 20. 06. 2014 Matrafured 2014 International Conference on Electrochemical Sensors, Visegrad, Hungary (poster)
  - 04. 04. 2014 4<sup>th</sup> ISE Satelite Student Regional Electrochemical Congress, RBI, Zagreb, Croatia (talk)
  - 03. – 05. 03. 2014 COST Action Meeting, M1202, Urbino, Italy (poster)
  - 05. 04. 2013 3<sup>rd</sup> ISE Satelite Student Regional Electrochemical Congress, RBI, Zagreb, Croatia (talk)
  - 06. – 09. 10. 2012 Workshop voltammetry and GEOTRACES, Šibenik, Croatia (talk)
  - 13. – 17. 05. 2012 3<sup>rd</sup> Regional Symposium on Electrochemistry, Bucharest, Rumunjska (talk)
  - 26. 04. 2012 2<sup>nd</sup> ISE Satelite Student Regional Electrochemical Congress, RBI, Zagreb, Croatia (talk)
  - 10. – 12. 10. 2011 2<sup>nd</sup> International Conference on Bio-Sensing Technology, Amsterdam, Netherlands (poster)
  - 07. – 08. 07. 2011 Symposium of young scientists at Rudjer Boskovic Institute, Scientific Encounters of the 3rd kind, Zagreb, Hrvatska (talk and two posters)
  - 03. 03. 2011 1<sup>st</sup> ISE Satelite Student Regional Electrochemical Congress, RBI, Zagreb, Croatia (talk)
  - 03. – 16. 02. 2011 XXII. Croatian meeting of chemists and chemical engineers, Zagreb, Croatia (poster)

## Popularisation and demonstration of science

- 2010, 2013, 2015 Zagreb, Croatia Participation at the Open Days of Rudjer Boskovic Institute, in the organisation and presentation of a popularised-science point „The eye of the dragon – anoxic core of the life in ancient past“ (2015)  
Participation at the Open Days of Rudjer Boskovic Institute as a tour guide of visiting groups (2010 and 2013)
14. – 16. 06. 2016 Plentzia, Spain Participation in the organisation and leading of an interactive experimental workshop for master and PhD students at the FP7-Ocean SCHeMA project Summer School.
05. 04. 2017 Genova, Italy Demonstration of sensors being developed as part of the FP7-OCEAN SCHeMA Project to potential end-users.

## Other professional activities

- 2014 - 2016 Member of the COST MP1202 Action entitled: Rational design of hybrid organic-inorganic interfaces: the next step towards advanced functional materials
- 2014 - 2016 Representative of PhD students in the Council of Division of Marine and Environmental Research, RBI
- 2014 - 2016 Representative of PhD students in the Council of Oceanology.
- September 2015 Participating in an archeological underwater (8 dives) research of a venetian ship Gagliana Grossa as part of an Archaeology of Adriatic Shipbuilding and Seafaring Project, lead by dr. Radic-Rossi and financed by the Croatian Scientific Foundation
29. 05 – 02. 06. 2011 Croatia Participation at the Symposium „Ruđer Bošković 300“, Dubrovnik, Croatia
- Since 2012 Member of the International Society of Electrochemistry
- Reviewer for: Sensors & Actuators: B. Chemical; Sensors; Arabian Journal of Chemistry, Environmental Science and Pollution Research

## Additional information

- CMAS P2 diver with 6 years of diving experience (131 dive)
- C2 level of the English language in speaking, writing and listening
- Basic knowledge of Ocean Data View and Mathematica softwares
- Basic knowledge of french and german
- Drivers licence, B category